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August 1977

200
NATIONAL TICK
SURVEILLANCE PROGRAM
Calendar Year 1975

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Animal and Plant Health Inspection Service
UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL TICK SURVEILLANCE PROGRAM

Calendar Year 1975

During calendar year 1975, the collection and submission of ticks from native and imported animals and plant and animal material were 59 percent less than in 1974.

There were 4,542 collections in 1975, compared with 11,042 collections in 1974 and 7,613 in 1973.

USDA-ARS RESEARCH ON CATTLE FEVER TICKS AT FALCON HEIGHTS, TEXAS

The U.S. Livestock Insects Laboratory (USDA-ARS) at Kerrville, Tex., established a sub-laboratory, tentatively called the Cattle Fever Tick Research Laboratory (P. O. Box 8, Falcon Heights, TX 78545), on 30 acres of land on a peninsula below Falcon Dam as a location for research on both *Boophilus annulatus*, the cattle tick, and *B. microplus*, the tropical cattle tick. The facility, surrounded by a tick barrier zone and chain link fence, presently consists of four trailer laboratories and two animal holding facilities.

Research activities include studies on the concentration of insecticides in dipping vats (in cooperation with

APHIS and Texas Animal Health Commission), studies on transmission of diseases of cattle by *Boophilus* (in cooperation with the Institute of Tropical Veterinary Medicine, Texas A&M University), and studies on the biology, ecology, and control of *Boophilus* (partly in cooperation with Department of Entomology and Agricultural Experiment Station, Texas A&M University). Additional studies include monitoring of *Boophilus* for resistance to acaricides, host relationships, survival in the field, and other research programs. The location of the Falcon laboratory on the Mexican border gives USDA and ARS a unique opportunity to obtain current information about cattle fever ticks.

CATTLE FEVER TICK ERADICATION PROGRAM IN TEXAS

State and Federal personnel continued tick surveillance activities in Texas during 1975. A total of 3,712 tick collections were made from all hosts in 1975 as compared to 5,192 collections in 1974, 6,041 collections in 1973, and 2,268 collections in 1972.

Although short of personnel and financial resources, the State and Federal Tick Eradication Program has contained the *Boophilus* infestations to the buffer zone and the quarantined areas outside the buffer zone. A total of 106 *Boophilus* collections from Texas were confirmed by the laboratory in calendar year 1975. As in other recent outbreaks, these infestations were found either in the buffer zone or near the zone.

The permanently quarantined buffer zone, under both State and Federal quarantines, extends approximately 500 miles from Del Rio to the Gulf of Mexico. The zone is regularly patrolled by Veterinary Services inspectors, who in cooperation with Texas Animal Health Commission personnel, apprehend stray animals from Mexico and prevent the dissemination of *Boophilus* ticks. The tick patrol along the Rio Grande is the primary defense against the reintroduction and reestablishment of *Boophilus annulatus* in Texas and some 12 other States where the tick was once a serious problem.

CHANGES IN THE DISTRIBUTION OF TICKS

Since 1969, the laboratory has received several collections of *Ixodes scapularis*, the black-legged tick, from Minnesota. At first such collections were thought to be temporary introductions on dogs brought into Minnesota from one of the Southern States where the tick is very common. Drs. Henry Griffiths and John C. Schlotthauer of the College of Veterinary Medicine, University of Minnesota, forwarded several collections for identification and were responsible for calling attention to the problem in Minnesota. In 1970, John O. Jackson and G. R. DeFoliart reported¹ on the establishment of *I. scapularis* in northern Wisconsin. Their collections date back to 1965.

Prior to the above reports, it was generally accepted that *I. scapularis* was primarily a problem in the southeastern quarter of the United States and along the Atlantic coast to Massachusetts. Although it had been reported in other Northern States, it was not known to

be established as far north as Minnesota and Wisconsin. It is now apparent that the black-legged tick is established in areas of Minnesota and Wisconsin. This illustrates again the changing geographical distribution of ticks. Other changes in distribution in recent years include: (1) the establishment of *Amblyomma maculatum* in northeastern Oklahoma from the Gulf Coast States; (2) the introduction of *Rhipicephalus sanguineus* from Florida and Texas into the Northern States; (3) the spread of *Otobius megnini* from the Western States into at least one county in eastern Tennessee; (4) the introduction of *Amblyomma variegatum* into Puerto Rico; and (5) the spread of *Ixodes affinis* from Central America to Florida, South Carolina, and Georgia.

These changing tick distributions point up the necessity of maintaining effective tick surveillance programs not only to monitor changes in the distribution of endemic species but also to detect the introduction of exotic species.

AMBLYOMMA VARIEGATUM IN PUERTO RICO

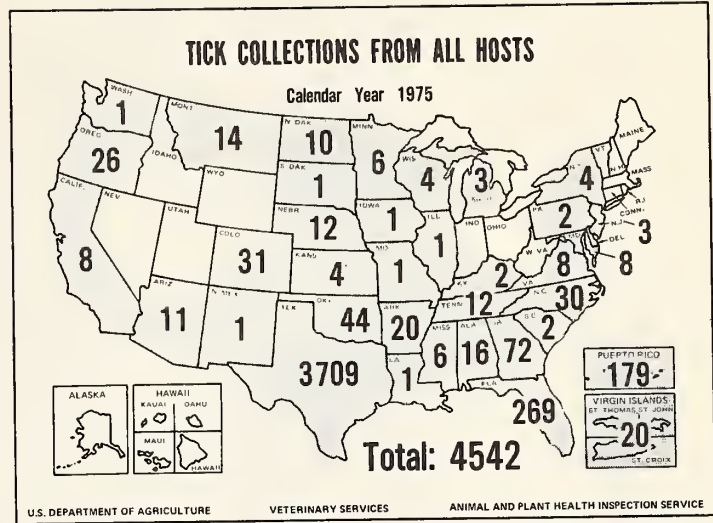
Amblyomma variegatum, the tropical bont tick, continues to be a problem in Puerto Rico. Since the detection of this tick at Rio Abajo, Cidra, Puerto Rico, in June 1974, it is now quite apparent that the tropical bont tick is well entrenched in Puerto Rico, especially in the municipalities of Cidra, Cayey, and Caguas. In 1975, 65 collections of *A. variegatum* were made from cattle and horses in these municipalities as compared to 68 collections in 1974.

At the present time there is no evidence that the tropical bont tick is present in other areas of Puerto Rico, but the potential for spread of the tick to other areas is quite high. With the resources available, the personnel of the Commonwealth Department of Agriculture and Veterinary Services have attempted to contain the tropical bont tick to the areas presently known to be infested. Field personnel are continuing surveillance to determine if the tick has spread to other areas of the island.

¹J. Med. Ent. Vol. 7, No. 1:124-125.

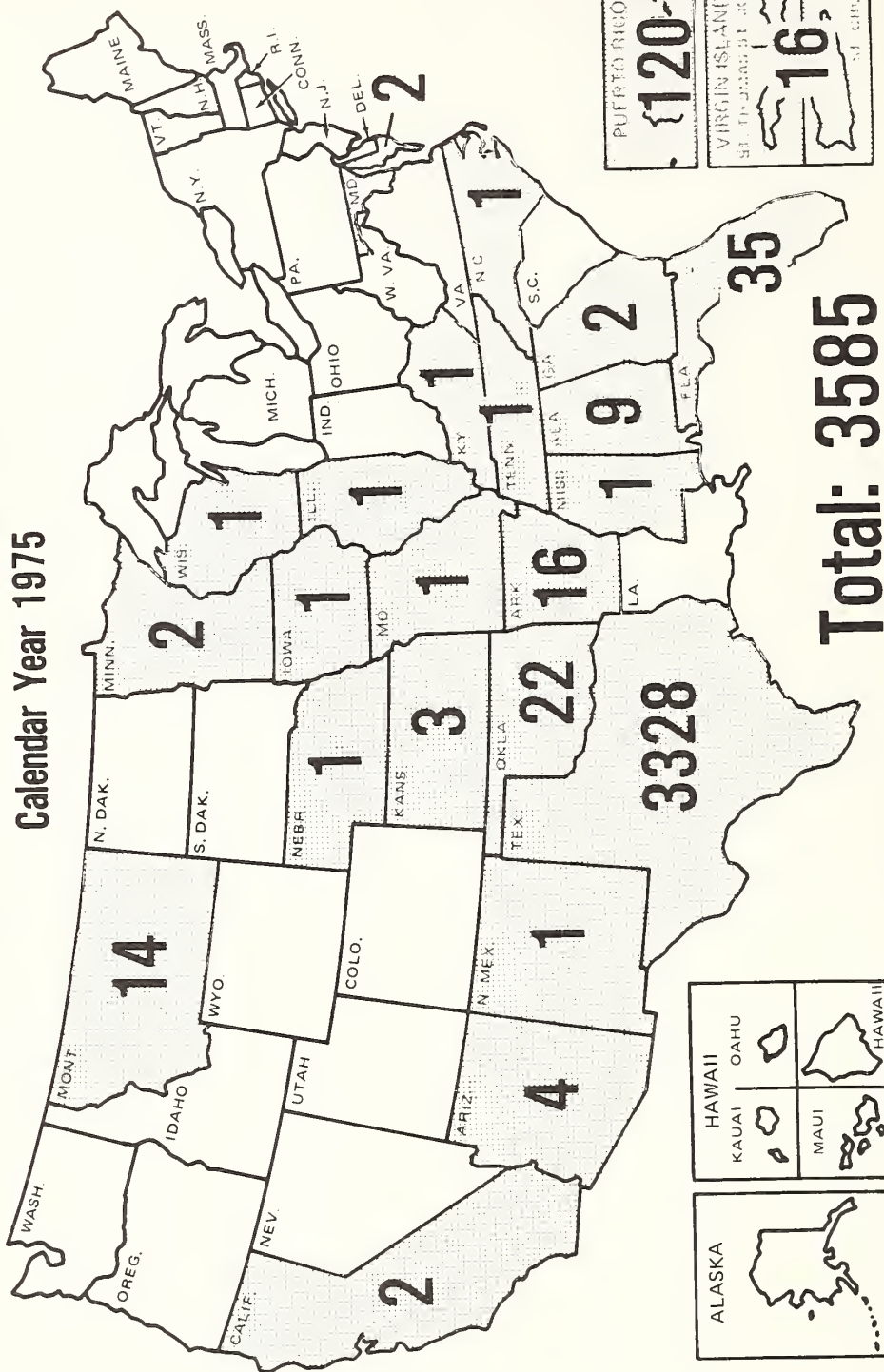
REPORT OF ALL TICKS COLLECTED
CALENDAR YEAR 1975

STATE	TOTAL	CATTLE	DOGS	HORSES & PULES	ZOO ANIMALS & P.S.C.	WILDLIFE	ANIMALS OFFERED FOR ENTRY
TOTAL	4542	3585	218	440	94	153	52
Alabama	16	9	2		2	3	
Alaska							
Arizona	11	4	1			1	5
Arkansas	20	16	1		3		
California	8	2	2				4
Colorado	31		25	1	1	4	
Connecticut							
Delaware							
Florida	269	35	10	220	3	1	
Georgia	72	2				70	
Hawaii							
Idaho							
Illinois	1	1					
Indiana							
Iowa	1	1					
Kansas	4	3			1		
Kentucky	2	1	1				
Louisiana	1				1		
Maine							
Maryland	8	2	1	1	3	1	
Massachusetts							
Michigan	3				2		1
Minnesota	6	2	3		1		
Mississippi	6	1	2		2	1	
Missouri	1	1					
Montana	14	14					
Nebraska	12	1	10	1			
Nevada							
New Hampshire							
New Jersey	3			1	1		1
New Mexico	1	1					
New York	4		1				3
North Carolina	30	1	8		10	11	
North Dakota	10		3	1	6		
Ohio							
Oklahoma	44	22	16	3	3		
Oregon	26					26	
Pennsylvania	2			2			
Rhode Island							
South Carolina	2					2	
South Dakota	1		1				
Tennessee	12	1	1	2		8	
Texas	3709	3328	117	170	39	17	38
Utah							
Vermont							
Virginia	8					8	
Washington	1		1				
West Virginia							
Wisconsin	4	1	3				
Wyoming							
Puerto Rico	179	120	9	36	14		
Virgin Islands	20	16		2	2		



TICK COLLECTIONS FROM CATTLE

Calendar Year 1975



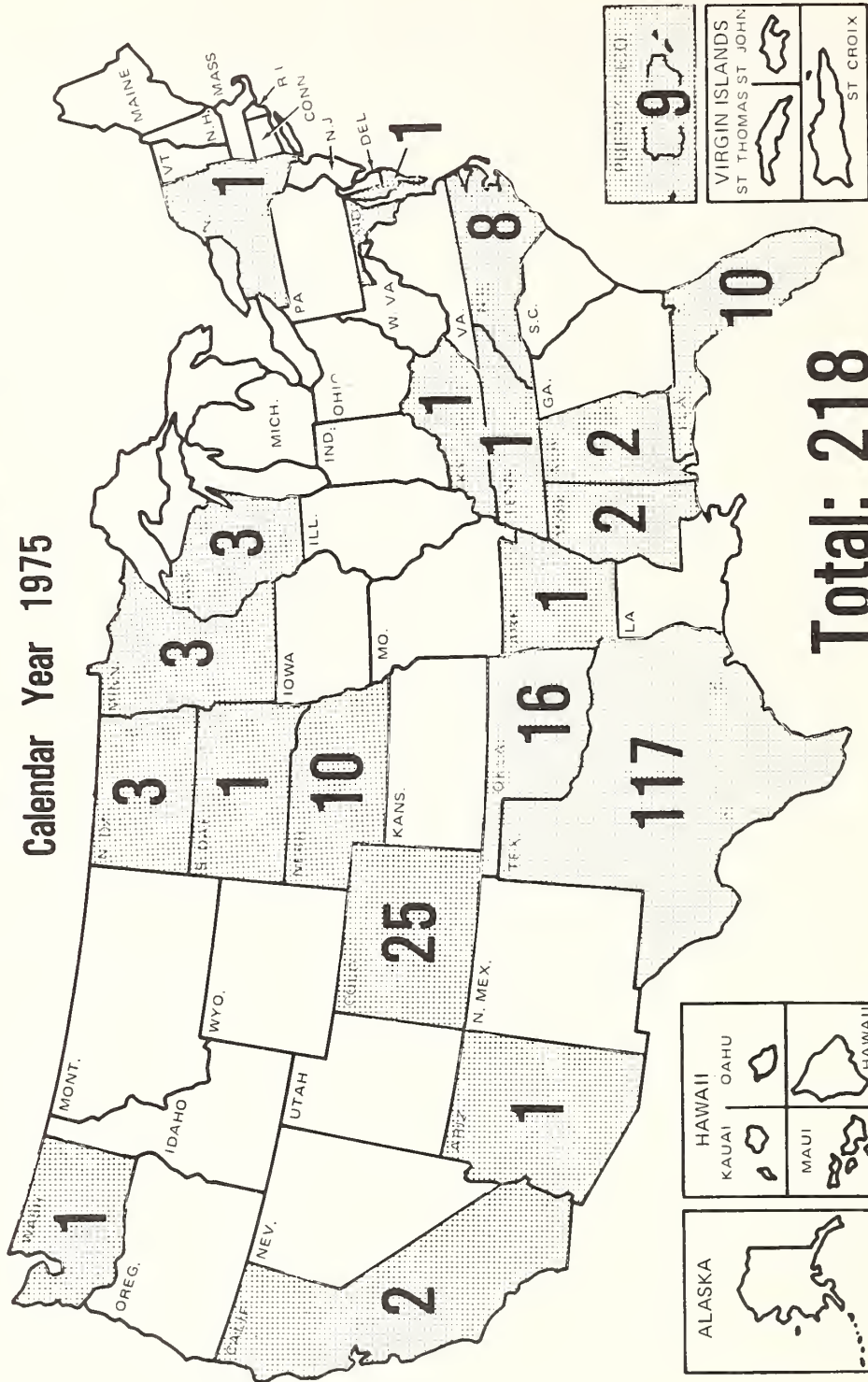
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ANIMAL AND PLANT HEALTH INSPECTION SERVICE

TICK COLLECTIONS FROM DOGS

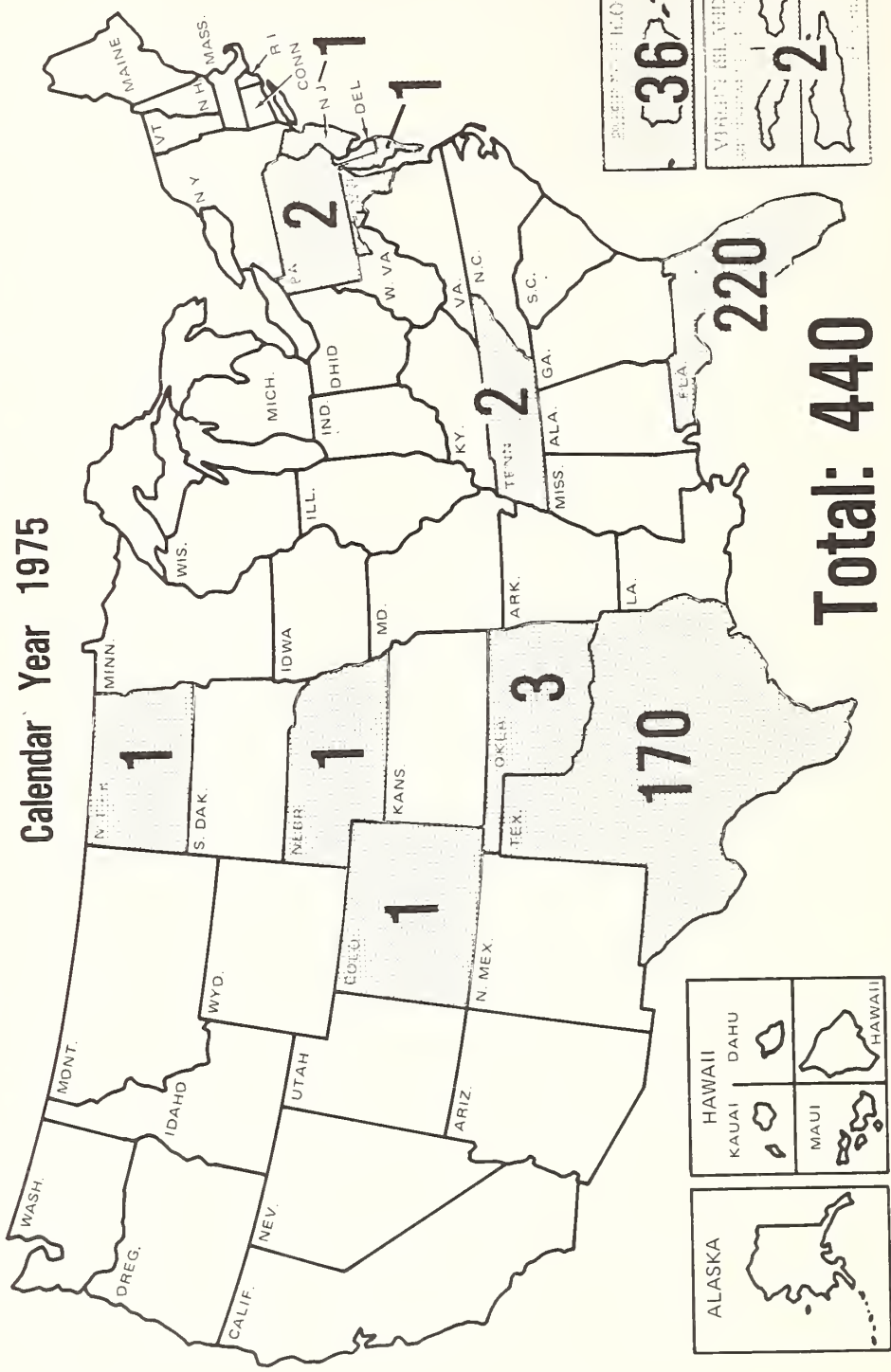
Calendar Year 1975



Total: 218

TICK COLLECTIONS FROM HORSES AND MULES

Calendar Year 1975



Total: 440

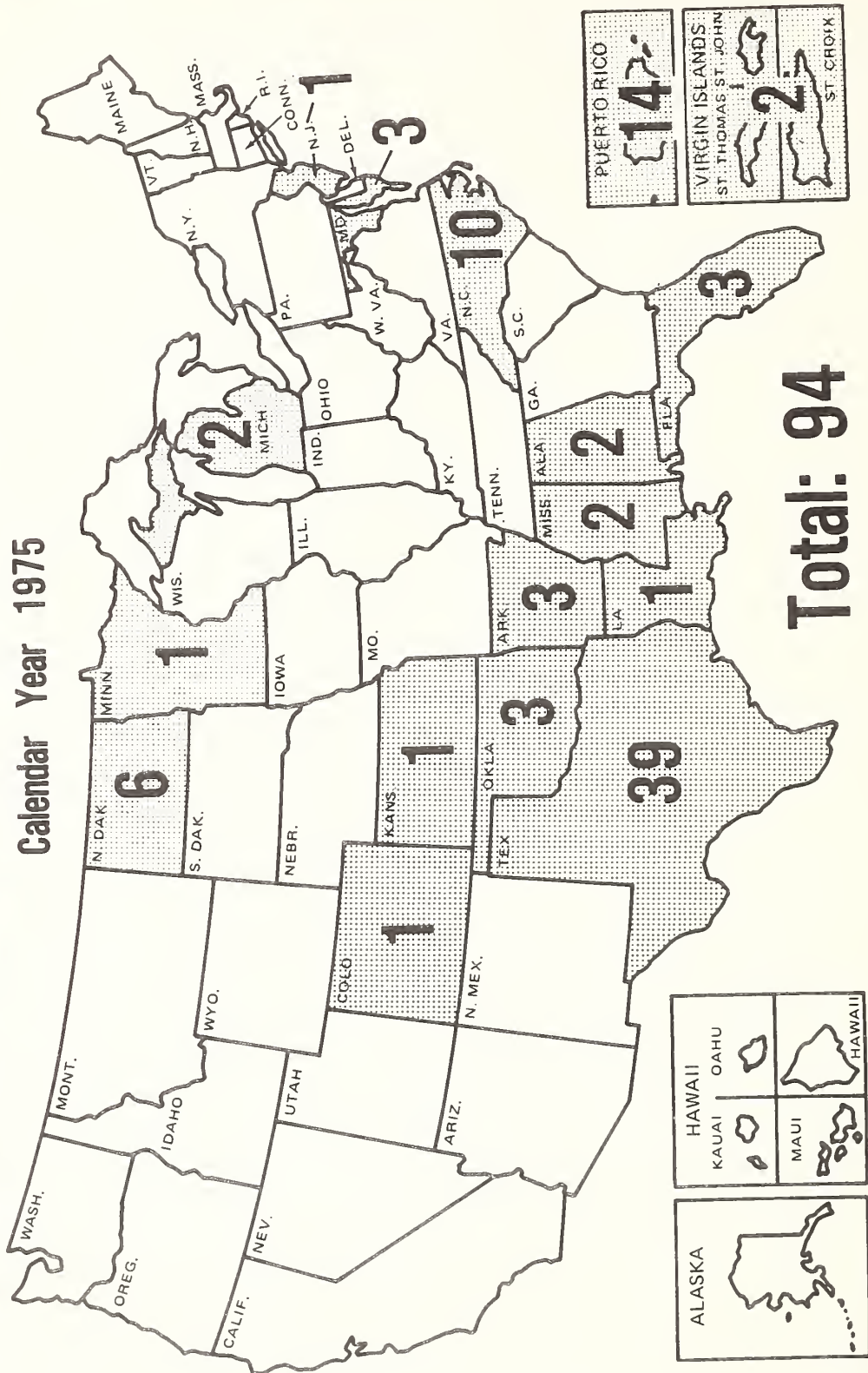
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ANIMAL AND PLANT HEALTH INSPECTION SERVICE

TICK COLLECTIONS FROM ZOO ANIMALS AND MISCELLANEOUS HOSTS

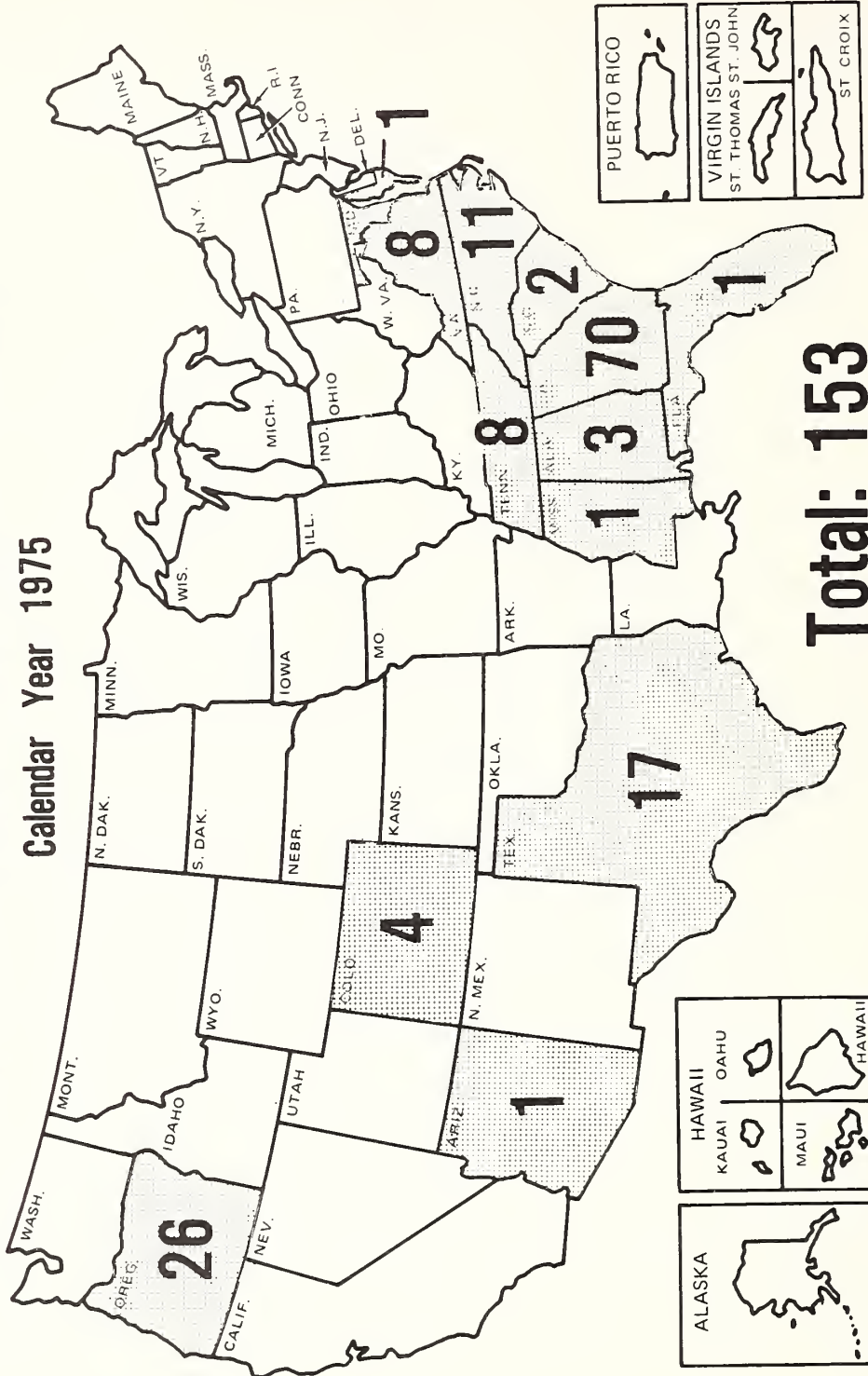
Calendar Year 1975



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TICK COLLECTIONS FROM NATIVE WILDLIFE

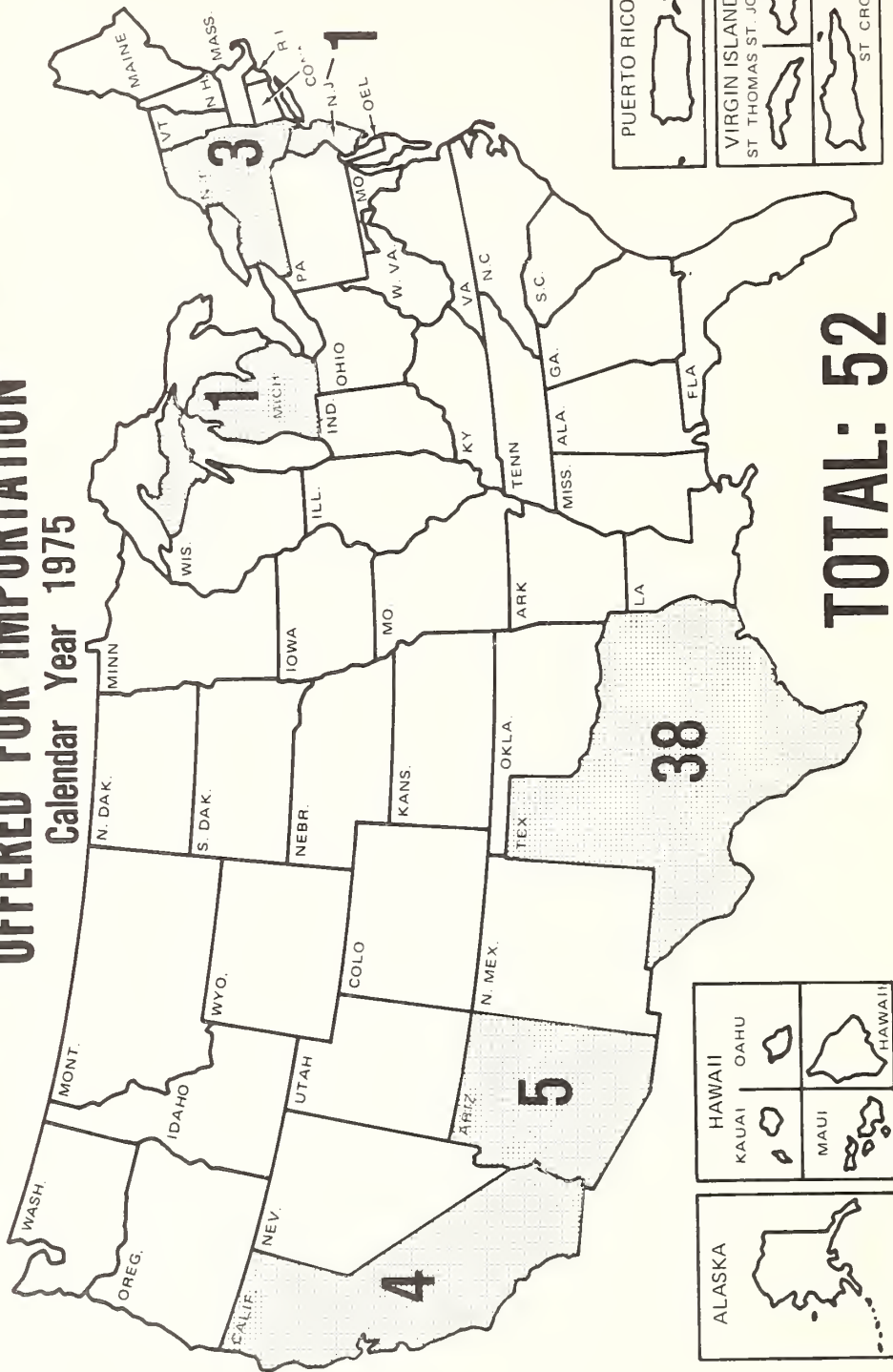
Calendar Year 1975



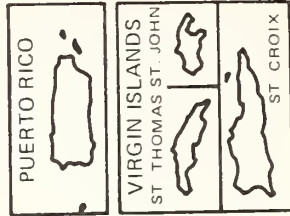
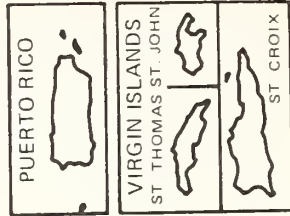
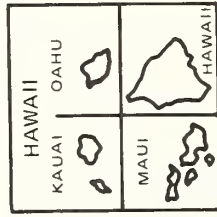
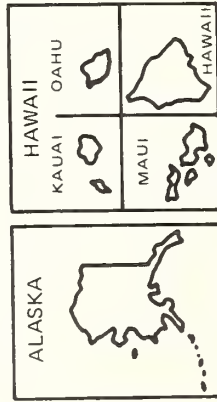
U.S. DEPARTMENT OF AGRICULTURE VETERINARY SERVICES ANIMAL AND PLANT HEALTH INSPECTION SERVICE

TICK COLLECTIONS FROM ANIMALS AND PRODUCTS OFFERED FOR IMPORTATION

Calendar Year 1975



TOTAL: 52



U.S. DEPARTMENT OF AGRICULTURE

VETERINARY SERVICES

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

REPORT OF TICKS COLLECTED

PERIOD
CALENDAR YEAR 1975

HOST TICKS FOUND ON ANIMALS &
PRODUCTS OFFERED FOR ENTRY
INTO THE UNITED STATES

STATE	TOTAL	AMBL. LYOMMA AMERICENSIS	AMBL. LYOMMA CA. ARIZONENSIS	AMBL. LYOMMA SULZ. TOLL.	AMBL. LYOMMA SP.	ARGAS PERSICUS	BOOPHILUS ANNULATUS	BOOPHILUS MICROPILUS	BOOPHILUS SP.	DERMAPENTON LEPTICUS	DERMAPENTON SP.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	DIPLOSPILUS S. P.	HOST TICKS FOUND ON ANIMALS & PRODUCTS OFFERED FOR ENTRY INTO THE UNITED STATES		
																											1	2	3
TOTAL	52	1	2		1	1	2		25			1	2	1	4	2									3	3	1	3	
ARIZONA																													
Nogales	3								1X																1X		1X ^a		
Tucson	2															2BH ^x													
CALIFORNIA																													
San Diego	4													1HO											1HO	1CT	1G		
NEW JERSEY																													
Clifton	1																											1Z ^e	
MICHIGAN																													
Detroit	1																											1X	
NEW YORK																													
New York	3								1IG ^g																			1HH 1TY	
TEXAS																													
Brownsville	4									2CT																			
Dallas/Ft. Worth	1																												
Eagle Pass	3								1CT					1CT															
El Paso	21																												
Laredo	6		1H											1DT		1DT												1X	
Fresidio	2															2CT													
Progreso	1		1X																										

Key to Host

- BH Bighorn
- CT Cattle
- OT Deer Trophy
- G Goat
- H Human
- HH Hedgehog
- HO Horse
- IG Iguana
- OR Orchid
- T Tortoise
- X Inanimate object
- Z Zebra

Key to Species

- a Argas sancrozi
- e Rhipicephalus evertsi
- l Haemaphysalis leachi
- s Amblyomma sculptum
- x Dermacentor hunteri
- y Ixodes neayptium

**Prepared by
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Animal and Plant Health Inspection Service
UNITED STATES DEPARTMENT OF AGRICULTURE**

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